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"NEC TENUI PENNA."

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EDITORS.

YELLOW FEVER IN LOUISVILLE.

On the 5th of August the first case of yellow fever was discovered in this city, and up to this period there have been between seventy and eighty cases. Sixty-two have been registered at the yellow-fever hospital. Sixteen of these have died, and nine have been discharged. There are now eleven decided cases in the hospital, three or four of which most probably will succumb. A case here and there has died in a hotel or private house. In every instance the disease is of foreign origin. *No case of yellow fever has originated in Louisville.* We have visited the yellow-fever hospital, by invitation, on three occasions, the last visit being made this afternoon (September 18th). This institution, under the excellent management of Dr. E. O. Brown and his assistants, is all that could be desired. The buildings are new, well ventilated, and exceedingly comfortable, and the medical attendance and nursing could not be better. Dr. Brown is ably seconded by Drs. Marvin, Lloyd, Keller, Griffith, and Berry. In going through the wards we were greatly impressed by the remarkable discrepancy between the pulse and temperature in the severe cases. With one or two exceptions the pulse was about seventy or eighty, while the temperature was 100° to 103°. The pulse in all cases was large, soft, and weak, as though the vessel was of more than normal caliber, but only partially filled. The tongue was red in most cases, coated, and of different colors in different patients. It was pale and flabby—malarial—in none. Most of the sick had dusky skins, and three or four were decidedly yellow. From Dr. Marvin, the obliging resident physician, we learned that there was no uniformity as to pulse or temperature, both varying in different cases and in different periods of the disease, and the same is true of the tongue. Dr. Marvin states that over fifty per cent of the cases have had black vomit, and the majority become yellow-skinned sooner or later. The bowels are generally loose and the discharges very offensive. The evacuations are in some cases bilious, in others bloody, and in others coffee-ground material. In all the bad cases a hemorrhagic tendency is observed. Cerebral symptoms come on in the majority of cases. Albumen has been found in the urine in *every case*, mild or severe, but sometimes not till the fifth day. Dr. Marvin, who is a close observer, and likewise a skillful microscopist and chemist (Professor of Chemistry in the Hospital Medical School), has kindly promised to furnish brief weekly bulletins from the fever-hospital for the MEDICAL NEWS. Eventually Prof. Marvin will publish in full the results of his observations, which can not fail to prove most interesting and valuable.

DR. LUKE P. BLACKBURN.—This true philanthropist is still in Hickman, Ky., day and night giving his professional services to its fever-stricken people. Differ as we may from Dr. Blackburn as to the nature and treatment of yellow fever, we can but honor and applaud this great-hearted, brave-hearted, kind-hearted physician for his fearless devotion to professional duty. Believing firmly, as he does, in its contagiousness, and never

having had the disease, he goes unhesitating to the poisoned lands, that he may bestow the benefits of his extended experience in yellow-fever epidemics upon his suffering fellow-men. Dr. Luke P. Blackburn's course exhibits the highest heroism, and Kentucky and the South can never forget his noble conduct in this dread scourge.

THE ROLL OF HONOR.

The following is an incomplete list of our noble dead who have fallen in the battle against yellow fever in the South.

The horrid battle rages still unabated, and its end can not be foretold by mortal ken. In the list of the dead we read the names of old friends and of young friends, of classmates, of pupils, and of Confederate comrades until our heart is sick with sorrow.

Dr. Chas. Gallagher,	Dr. W. W. Hall,
Dr. Herndon,	Dr. Hughes,
Dr. B. W. Avant,	Dr. Gillespie,
Dr. Woolfolk,	Dr. E. J. Hughes,
Dr. Chas. Bonner,	Dr. May,
Dr. Catlett,	Dr. F. Sarner,
Dr. T. L. Bond,	Dr. J. C. Rogers,
Dr. Menees,	Dr. Hopson,
Dr. J. R. Renner,	Dr. K. T. Watson,
Dr. Jno. B. Hicks,	Dr. W. R. Hodges,
Dr. Lehman,	Dr. T. M. Dickinson,
Dr. Jno. Erskine,	Dr. R. B. Williams,
Dr. Cage,	Dr. Mead,
Dr. McGregor,	Dr. Booth,
Dr. Blanton,	Dr. P. F. Whitehead,
Dr. Milton,	Dr. J. G. Byrne,
Dr. Hawkins,	Dr. Nathan McGee,
Dr. J. S. Bankson,	Dr. J. E. Penn,

Dr. M. J. McKee.

TESTIMONIAL TO PROF. BELL.—Tuesday night, at Louisville's Industrial Exposition building, the citizens *en masse* assembled to express their gratitude to Dr. Bell, the venerable and learned Professor of Theory and Practice of Medicine in the University of Louisville, for his preservation of our city from panic. The Rev. Stuart Robinson, on behalf of the citizens, presented a beautiful gold medal, appropriately inscribed, to Prof. Bell, accompanying it with an eloquent address conveying the cordial sentiments of his fellow-citizens. Prof. Bell responded in his usual happy manner.

Original.

ETIOLOGY OF YELLOW FEVER.

BY J. M. CLEMENS, M. D.

The appalling destruction of life by yellow fever in our sister cities of the South at this time demands that the uncertainty in the minds of medical men as to its etiology should, if possible, be cleared away, in order that we may intelligently direct our efforts to its prevention and cure. This is to be evolved out of the careful consideration of the various theories advanced on the subject, and by subjecting them to the test of explaining the various phenomena characterizing the disease. As I have a theory as to the specific source of this disease, as also the so-called malarial fevers, which, so far as I am familiar with their behavior, bears this test, I am sure I will be pardoned for advancing it at this time.

We know that in the geographical distribution of the higher order of vegetable growths there are families, orders, species, and even varieties of the same species indigenous to the climate and latitude of the whole earth, as shown, for example, in the distribution of the coniferæ or pine family; that in the warmer latitudes of our own country great numbers of specimens of the vegetable kingdom abound and flourish which can not exist in the higher latitudes, as, for example, the palm-tree and the banana-plant; that in the tropics infinite varieties grow luxuriantly the year round which can not exist in any part of the United States except as hot-house plants. We know that of the thousands of these vegetable growths, which have yielded to the physician valuable medicinal agents with which to combat disease, hundreds possess definite toxic properties (in-

stance opium, belladonna, aconite, helebore, etc.); and while in their action upon individuals there may be, on account of age, sex, peculiarities of constitution, and condition of system variations in degree of intensity and in some of the sensible signs or manifestations of the poison, yet there are certain general symptoms by which they may always be recognized. I wish to emphasize one other fact in connection with the action of these agents upon the human economy; that is, they not infrequently antagonize each other in so much as to destroy and render inoperative their toxic powers, as shown in the power of belladonna—or its active principle, atropia—to destroy the poisonous properties of opium, or its active principle, morphia. The antagonism is not limited to the manifestations of the active principle of the vegetable growth upon man. It is not uncommon for not only one family, but one variety of a particular species to destroy another variety of the same species; so that practically they can not exist in the same locality.

Now, without virtually charging nature with inconsistency, we are forced to conclude that the same laws of distribution of habit and endowment with specific properties govern the lower order of life that we find governing the higher. So far as the investigations of the botanist, therapeutist, and toxicologist have extended into the lower order of vegetable life embraced in the cryptogamic family, they have found the same laws governing. The order filices, or fern family, is a notable example, being almost world-wide in its distribution and almost infinite in variety. Many of them are known to possess medicinal and toxic properties. Of the lower order of cryptogamia, the fungi, we know that some of the varieties of mushroom possess definite toxic properties when eaten.

I come now to the field in which, from much thoughtful consideration of the subject, I am fully persuaded that the physician, aided by the microscopist and the botanist, will ere long discover and demonstrate beyond cavil the true source of all our so-called malarial diseases, including intermittent, remittent, and yellow fevers, cholera, and many other diseases the etiology of which is and for ages has been the subject of such contrariety of opinion.

Fungi are parasitic flowerless plants which germinate upon and draw their nourishment from dead or decaying vegetable and animal substances.

The sub-orders and varieties of fungi are almost infinite in number; so much so that thus far botanists have been deterred from any attempt at describing more than a few of them, much less to classify and give their geographical distribution. I may mention some of them, as, for instance, the mushroom, smut, puff-balls, molds, mildews, etc. Every one is familiar with the marvelous rapidity with which these sub-orders or varieties of fungi are under favorable circumstances propagated. The manner of propagation is by sporules, which are developed, mature, and are thrown off in such abundance as to fill the very air, in so much that it is readily detected by the odor. These spores are infinitesimal in size, and their permeating power is only limited by the same power of their vehicle of distribution, atmospheric air.

I wish those varieties represented by mold and mildew kept in mind. We are all familiar in a general way with the habits of these varieties of fungous vegetable growth, as seen in, on, and about decaying vegetable matters and their juices, damp papered walls (the more paste the better); damp or wet earth in which there is dead or decaying vegetable matters (provided it is not submerged under water); in such earth it will penetrate to untold depths. In drains, sewers, waste-pipes, in damp woolen or cotton fabrics; in short, wherever there is dead or decaying vegetable matter in conjunction with moisture and a solar temperature varying, in my opinion, according to the species or variety to be propagated—from 50° to 75° or thereabout. Those indigenous to this country being much hardier than species of

the same order which, I am confident, exist in warmer climates, require perhaps a mean temperature of 50° or 60° from their rapid propagation.

Now to this order of fungous plant, the spores of which fill the air in the neighborhood of its habitat, and entering the mouth with food and drink, in breathing with the mouth open (most apt to occur in sleep), myriads of them, becoming entangled in the saliva, are taken into the stomach in the act of deglutition; the most direct method of introduction into the system, however, being by way of the air-passages, where they find ready entrance through the thin, delicate walls of the air-cells into the blood, through which medium they act upon, paralyzing or perverting the nervous centers of both the vaso-moter and ganglionic systems, producing the so-called malarial fevers of this climate. I believe that the intensity of the poison, consequently of the disease it produces, always and will ever be found to be in direct ratio with the degree of solar temperature and the amount of decaying vegetable matter (or filth, in its most latitudinous sense, if you like) in conjunction with a proper amount of moisture.

I adopt the facts demonstrated beyond dispute by that great scientist, our own Dr. Bell, to whose grand acquirements and self-sacrificing zeal in the interest of humanity, our people, at this time, when the whole country stands aghast at the frightful havoc that a terrible disease is committing among our southern neighbors, owe their feeling of security and our city her proud position as an asylum and city of refuge for the terrified, fleeing citizens of her sister cities. I say I adopt the facts as set forth by Dr. Bell in regard to the absolute necessity of the conjunction of a mean solar temperature of 60° day and night for sixty days, with decaying vegetable matter and moisture, to produce intermittent and remittent fevers; and that it requires the conjunction of the same elements, with a mean temperature of 75° or more for the same length of time, for the production of yellow fever.

I believe, however, as I have already indicated, that the essential principle is to be found in the spores of a species of fungous plant indigenous to this country, which requires the conjunction of a mean solar temperature of 60° for sixty days, with decaying vegetable matter and moisture, as conditions absolutely indispensable to the propagation of the fungus in sufficient quantity to produce its toxic effects as exhibited in our so-called malarial fevers.

I entertain not the slightest doubt that there exists in the tropics at all times a species of the same order of fungous plant upon which depends the essential cause of yellow fever. Possessing the same general toxic properties, producing the same general symptoms, yet, like the active principle of some of the higher order of plants—as, for instance, of the papaveris or poppy family—it possesses greater intensity, and in some respects produces symptoms peculiar to itself, as exhibited in the effect upon the kidneys, resulting in the production of albuminuria and the throwing off of tube-casts. What physician, jealous of his reputation, without previous history of the case, and without the aid of the microscope and the tests for albumen, would in times like these dare to pronounce this to be yellow fever or that to be pernicious remittent fever?

We know that not only the germs or spores of these plants, but the plants themselves are portable, and that nothing could be more favorable for their transportation than a ship, with its bilge-water, and the filth that accumulates on and below deck, to say nothing of its mixed cargo. If, however, the spores or plants are by any means conveyed to this or any other country at a season when there is a mean temperature of 75° or upward for two months, with decaying vegetable matter and moisture, the fungus will inevitably be produced, and will inevitably produce the disease.

Without the importation of these germs, the conjunction of the other three agents for six months or any other length of time could no more produce yellow fever in this

country than it could produce a banana-plant in Nova Scotia.

In this city we certainly have the germs of the essential cause of yellow fever brought here by the numerous refugees, with their baggage, from the infected districts; yet unless we should have a mean temperature for two months higher than Louisville has ever known, it is utterly impossible for the essential cause of the disease to be propagated, therefore impossible that we should have yellow fever in Louisville.

I am satisfied that the peculiar fungus on which I believe the disease to depend can not be propagated in a temperature of less than 75°, any more than I believe any other tropical plant can exist here outside of a hot-house during the winter months.

Therefore I believe in the efficacy of strict quarantine, when practicable, for all points where a mean temperature of 75° or over is likely to exist for sixty days. This condition we have never had in the history of Louisville, therefore we need no quarantine. I believe in the scrupulous cleanliness of streets, alleys, sewers, drain- and waste-pipes. I regard wooden pavements as exceedingly dangerous to the health of any city within the latitude infested by the so-called malarial diseases. I have little doubt that the decaying Nicholson pavement of Memphis is a most potent factor in the calamity that has befallen that city. I believe in the efficacy of disinfectants, such as lime, copperas, permanganate of potash, bromine, and chlorine (I must confess that I have little faith in carbolic acid), because all of these are fatal to the existence of the fungous plant. I believe in the prophylactic and curative powers of the salts of Peruvian bark, because I am as fully persuaded that quinine, their chief, is an antidote to the poison as I am that belladonna is an antidote to the opium-poison. I should expect beneficial results from the internal administration of sulphate of iron, as it is fatal to all species and varieties of fungi. I therefore believe an individual in an infected district may be protected against the disease by the systematic, judicious administration of quinine, or other salts of Peruvian bark, with sulphate of iron.

While touching on treatment, I may be pardoned for adding that for the kidney-trouble, which I regard as analogous to the acute desquamative nephritis met with in scarlatina, either co-existent or as a sequel, I should expect it to be amenable to the same treatment; that is, tannic or gallic acid in combination with quinine. I should also apply cups, hot fomentations, and poultices over the region of the kidneys.

I think Dr. Rodman, in his interesting and able article on yellow fever, is in error in adopting Dr. Austin Flint's statement, that intermittent and remittent fevers prevail by preference in rural districts. I do not of course find fault with his claim for the habitat of yellow fever. The truth is, that in the latter part of the summer, and the early part of the fall season, the marshy and other low, flat regions, with their luxuriant crop of vegetation in a languishing and decaying condition, furnish in an eminent degree the conditions necessary to the rapid and bountiful propagation of the peculiar fungous plant on which depend these diseases, and as an inevitable result the diseases prevail extensively in such regions at this season; but having no concealed positions, such as are afforded by the sewers, drain- and waste-pipes, damp walls, cellars, etc. of large towns and cities, its vitality is destroyed by the frosts of winter, when the inhabitants enjoy an immunity from the diseases; while it is a notorious fact, that will be verified by every intelligent physician of this or any other city in the whole country infested by this fungus, that all through the winter, and the whole year round, we have isolated cases of intermittent and remittent fever.

Yellow fever prevails almost exclusively in cities in this country, for the reason that the fungus upon which it depends finds only in the sewers, waste-pipes, damp walls, and cellars of closely-crowded houses in the cities the exalted temperature, night as well

as day, essential to its existence. It finds it in the hold of the ill-starred steamer John Porter, which, having received the germs at New Orleans weeks ago, has simply served as a hot-bed for their propagation ever since; every particle of organic matter, as well as the bilge-water contained in the hold, being thoroughly permeated and covered by the fungus. Heated during the day by the direct and reflected rays of the sun, and protected by its position during the night against the surrounding atmosphere, which by evaporation from the surface of the water and earth is lowered to a point incompatible with its existence; but concealed, protected as it is, it will hold high carnival until the frosts come and force down the temperature of the atmosphere in its citadel through its very walls, unless the bilge-water contained in the hold is thoroughly saturated with sulphate of iron, lime, or permanganate of potash, and bromine and chlorine set free in the hold, with the hatchways closed, in order that it may permeate every crevice, mass, and particle of organic matter contained in it. This I religiously believe will destroy the true cause of yellow fever.

LOUISVILLE.

[Much of this paper appeared in the Courier-Journal, but by request we publish it in full in the NEWS.—EDS.]

Miscellany.

ABSTRACT OF SANITARY REPORTS RECEIVED DURING THE PAST WEEK UNDER THE NATIONAL QUARANTINE ACT:

OFFICE SURGEON-GENERAL, U. S. M. H. S.,
WASHINGTON, September 14, 1878.

Memphis. During the week ended at six o'clock, September 12th, there were six hundred and eighty-seven deaths from *yellow fever*. It is impossible for the Memphis authorities to ascertain the number of cases.

Brownsville, Tenn. The first case of probable *yellow fever* occurred on August 29th, resulting in death September 2d, since which time there have been nine deaths from *yellow fever*. There were thirty cases under treatment last evening. At least two thirds of the population fled the city between the 1st and 4th inst.

Holly Springs, Miss. One hundred and sixteen new cases of *yellow fever* and forty-two deaths occurred during the week ended yesterday evening, making in all two hundred and sixteen cases and sixty-seven deaths. All of the resident physicians are sick.

Canton, Miss. One hundred and fifty new cases of *yellow fever* and twenty deaths for the week ended yesterday evening. First case, August 1st. Total cases, three hundred and forty; total deaths, fifty.

Port Gibson, Miss. Dr. Wharton, of the Mississippi State Board of Health, reports about five hundred cases of *yellow fever* and ninety-four deaths to yesterday noon, and "very few subjects left to take it."

Water Valley, Miss. One citizen taken with *yellow fever* September 1st, and died on the 7th. No other cases to yesterday evening since the refugee cases reported in August.

Ocean Springs, Miss. Sixteen cases of *yellow fever* and four deaths occurred during the week ended yesterday evening, making thirty-four cases and nine deaths in all since commencement, August 30th.

Pass Christian, Miss. From August 29th to September 9th there were fifteen cases of *yellow fever* and one death.

Bay St. Louis, Miss. Six cases of *yellow fever* developed in Bay St. Louis during the last week; two deaths. No new cases yesterday.

Pascagoula, Miss. One of the cases previously reported has since died. No new cases.

New Orleans. During the week ended yesterday noon there were fifteen hundred and twenty-eight cases of *yellow fever* and five hundred and thirty deaths, making in all sixty-one hundred and thirty-seven cases and nineteen hundred and twenty-five deaths.

In the last twenty-four hours to Friday noon there were two hundred and twenty-eight cases and fifty-eight deaths.

Plaquemine, La. One hundred and seventy-five cases of *yellow fever* and thirty-seven deaths had occurred up to September 8th.

Morgan City, La. There have been twenty-five cases of *yellow fever* and eight deaths, of which three cases and two deaths occurred during past week.

Port Eads, La. No cases and no deaths from *yellow fever* during last week. There were twenty-one cases and two deaths from August 16th to 31st (period not previously reported), making in all sixty-seven cases and eight deaths.

Mobile. One death from *yellow fever* occurred on the 9th inst.; no other cases to last evening. City healthy.

St. Louis. During the week there were two cases, of local origin, said by some to be *yellow fever*, disputed by others. One died; the other was sent to quarantine hospital, where nine refugees died of *yellow fever* during the same period.

Cairo, Ills. The editor of the Cairo Bulletin died of *yellow fever* on the 12th inst. One employe of the Bulletin office died yesterday. No other cases. On the 4th inst. four members of a family residing two miles from Cairo, on the bank of the Mississippi, were suddenly stricken with *yellow fever.* Upon the 10th the remaining two members of the family were attacked. One died. The children found an abandoned skiff in the river, and removed it to the house for repair. Three or four days afterward all who were around the boat were stricken with fever in one day. The quarantine physician dissents from the diagnosis of the attending and consulting physicians.

Hickman, Ky. The telegraph operator is reported dead. No other information has been obtained.

Louisville. There were nineteen new cases of *yellow fever* and seven deaths for the week ended yesterday evening; all refugees.

Cincinnati. From September 4th to yesterday evening there were seven cases of *yellow fever* and four deaths, all of whom were recently from infected places south.

Gallipolis, Ohio. There have been twenty-five cases of *yellow fever* and nine deaths resulting from communication with the steamboat John D. Porter and her barges while anchored near Gallipolis. This vessel and her infected barges ascended the Mississippi and Ohio rivers from New Orleans to Gallipolis with effect much like a firebrand among explosives. The local health authorities could only prevent her landing, and the law forbids this office interfering in such cases.

Key West. One case of *yellow fever* and one death during the past week.

Kingston, Jamaica, Sept. 3d. A few cases of *yellow fever* have occurred at Port Royal, six miles from Kingston; one proved fatal. The steamship Ætna, from Hayti, arrived at Kingston on the 1st instant, with the purser sick of *yellow fever* contracted in Hayti.

Calcutta. There were eleven deaths from *cholera* and twenty from *small-pox* during the week ended July 13th.

Bombay. Twenty-two deaths from *cholera* and nine from *small-pox* for week ended 23d July.

Havana. Fifty-one deaths from *yellow fever* and five from *small-pox* during the week ended September 7th.

During the week ended August 24th there were twenty-four deaths from *scarlet fever* in *Birmingham, England*, and the same number in *Liverpool* and *London.* In *Hamburg* there were thirty-one deaths from *typhus fever*, eleven from *enteric fever*, and twenty from *diphtheria* in the same week.

In *Alexandria, Egypt*, the annual rate of mortality per thousand of the population, based on the weekly mortality for the week ended August 8th, was 58.8.

No official reports could be obtained from *Vicksburg, Grenada, Baton Rogue, Bolton*, etc.

Reports from other places indicate good health.

JOHN M. WOODWORTH,
Surgeon-general U. S. Marine Hospital Service.

CASE OF OVER TWO THOUSAND BILIARY CALCULI FROM ONE PATIENT.—W. M. Dunlop, M. B., C. M., in London Lancet:

M. H., aged ninety-four, an imbecile, died suddenly on February 12th last. For the last two years of her life she had suffered from chronic bronchitis, and her mental faculties had during the last six months become much impaired. For the last year or two she had occasional attacks of spasmodic but not acute pain referable to the hepatic and epigastric regions; and sometimes, when she was moved in bed, suffered from pain, also referable to those regions, so severe as to cause her to scream loudly. Physical examination of the hepatic region discovered an enlarged liver. She never had any jaundice. Considering her advanced years, her general health was fairly good, and her body well nourished.

I made a post-mortem examination on the 13th February; and as I wish in this paper to call attention to one pathological feature in the case, I only make the following condensed statement of the morbid appearances apart from that to which I wish to refer. The heart was dilated and flabby, and there were two atheromatous patches upon the ascending aorta. The mucous membrane of the bronchi was much thickened and pigmented. The brain was soft, its vessels were much diseased, and at its base there was a hemorrhage, about the size of a penny, the result of rupture of a blood-vessel, and no doubt the immediate cause of the sudden death. On opening the abdominal cavity the liver was found to be much enlarged, weighing seven pounds and three ounces. There was advanced amyloid degeneration of the entire organ. The gall-bladder projected at the anterior edge of the liver, and it is to its contents I wish to refer. The viscus itself was much dilated, being nearly the size of the closed fist, and its walls were so much thinned and transparent as to render its contents partially visible. The cystic duct was completely occluded, but the ductus communis choledochus and the hepatic duct were quite patent. On opening this enlarged bladder it was found to be packed with calculi, and to contain also nearly an ounce of inspissated bile of a yellowish-red color.

After carefully cleansing the gall-stones in cold water, and counting them, I found them to amount to the extraordinary number of two thousand and eleven.

There seems to me to be five different sizes: three are as large as a Spanish nut, twenty-seven are of the size of its kernel, one hundred and sixty-three are as large as a pea, and two hundred and thirty-seven are of the size of peppercorns. The remainder, amounting to fifteen hundred and eighty-one, vary in size from that of bird-seed to that of "sparrow-hail" shot. The smallest (or any) of these stones, when examined under a magnifying glass, does not show any signs of fracture, or other appearance suggestive of it being a fragment of another or larger stone.

The total weight of the calculi amounts to seven hundred and thirty-seven and one fourth grains. Nearly all of them sank when placed in water, the few small ones which floated being probably porous, sinking in a few minutes to the bottom.

In shape they presented the usual form of biliary calculi, possessing several surfaces of various sizes, with rounded lines and angles, the result being that the contour is rather irregular, but with a general tendency to assume the globular shape. They are all distinctly facetted, some more so than others, the facets numbering in some instances five, in others three, while in others again only one facet can be distinguished.

Larger numbers have been recorded. Burseus gives one case in which the number amounted to twenty-six hundred and forty-six; Tasch and Meckel found upward of three thousand, and a case of Otto's is on record in which seventy-eight hundred and two calculi were counted, as quoted by Dr. Thudichum in his excellent treatise on Gall-stones. Upon the other hand Dr. Thudichum states that the most common number to find is from two to ten, and that the size

of calculi stands in inverse ratio to their number.

METALLOSCOPY.—Lond. Med. Examiner: M. Charcot has lately contributed further facts to the Société de Biologie touching the influence of magnets upon cases of hemi-anæsthesia of hysteric and of cerebral origin. The influence of magnets has been known for some time; and authors, as Andry, Becker, and Maggiorani, have written on the subject, but they did not reduce the discovery to a scientific basis. M. Charcot has now determined, in a precise manner, that magnets act upon hemi-anæsthesia of cerebral cause, or of hysteric origin, absolutely as metals and electric currents. The effects of magnets, of metals, or of currents are so singular that many physicians have doubted their existence. Mr. Charcot exhibited two hysterical patients attacked, the one with left, and the other with right, hemi-anæsthesia. The action of a magnet removed the anæsthesia and transferred it to the sound side in the case of hysteric origin, but the transference did not take place in the case of hemi-anæsthesia of cerebral cause. The different action furnishes a diagnostic sign of great importance.

ELECTRIC LIGHT.—London Lancet: Last year we had occasion to direct the attention of readers of the Lancet to the successful lighting of the Gare de Lyon by the electric light, and now we can confirm that which has been known by report, that the success obtained in the illumination of the new Avenue de l'Opéra is complete in every way. It is impossible to believe that those who have become accustomed to the clear bright light given by M. Joblochkoff's arrangement will ever be contented to return to the dim yellow gas-lights, which seem, by the side of their electric rival, merely to make darkness visible. The employment of double opalescent shades has served not only to dim the excessive brightness which might have proved destructive to the eyes, but, by diffusing the light more generally, has done away with those heavy shadows which hitherto have been fatal to all systems of electric lighting. We doubt whether the height of the lamps is sufficiently great, and whether a more economic use of the light might not be effected if the lamps were hung over the center of the street by means of cords stretching between the eaves of the roofs of opposite houses. One electric light, which is said to equal some hundreds of gas-jets in illuminating power, is stated to give light sufficient for working purposes within a radius of one hundred yards, which corresponds to a superficies of more than three thousand square yards. Such a light is produced at present by means of Gramme's electric machine, and for the rotation of the machine an engine of two and a half horse power is necessary. Notwithstanding this the light is economical, and, of course, has many other advantages, not the least of which is that it takes no oxygen from the air. The introduction of the electric light has caused the shareholders in gas companies to tremble for their dividends.

CHOREA AND HOOPING-COUGH.—Dr. Sturgis, of London, in a late work, expresses himself as without faith in medicine in these neuroses, both of which, he says, "run their course, little modified by any medicine the physician may prescribe." He faintly admits that arsenic may possibly sometimes hasten the time of improvement in chorea. The editor of the Edinburgh Medical Journal, reviewing Dr. Sturgis's book, declares emphatically his confidence in the curative power of arsenic in chorea. In our own judgment not only arsenic but quinia and iron are frequently of the utmost benefit in this disease. Furthermore, if the chorea be of rheumatic origin, salicylic acid often cures it, and if it be syphilitic, iodide of potash is generally effective. As to hooping-cough, we can not understand how the efficacy of quinia in this neuroses can be denied, and bromide of potash and atropia are certainly often as curative in it as they are

in epilepsy. True, none of these remedies can be called specifics, and the treatment of pertussis and chorea are by no means as certain as could be desired, but unquestionably we may cut short many cases, and in nearly all we may do great good by proper medication.

DR. ALLBUTT ON BRAIN.—London Med. Record: "A dyspeptic may well have nerve-force of high quality and high tension, but," says Dr. Allbutt, "I never met with a dyspeptic whose nerve-force welled continuously forth. Like Brougham and Cavour, men of great power of continuous work have usually been large as well as sound eaters. A 'hard headed' man is also a hard bodied man; and the national history of Europe is a long display of the successive triumphs of the men of colder over the men of warmer regions, of the hardy, lusty, and hungry races over the softer, more indolent, and more absteminous." . . "I am not one of those," continues the author, "who think the love of athletics is as yet in excess. Here and there men may expend in the hunting field or on the river that which should have been given to their tripos, to their profession, or to their country; yet this at worst is but an individual loss, far outweighed by the impulse given to the hardy, hungry vitality, by which the nation thrives, and its general volume of nervous force is augmented."

OLD LIGHT.—The Romford (Eng.) Board of Health determined, at a recent meeting, to continue to light their town with oil instead of gas. It appears that though gas is admitted to be less troublesome than oil, the use of the latter has resulted in a considerable saving annually on one hundred and ten lamps.

ICE-WATER.—This most delicious and most harmless of drinks, for so long an American luxury, almost unknown in other countries, is now furnished on some of the English railways.

BRAIN AND STOMACH.—London Medical Record: "Of all endowments," writes Dr. Allbutt, "control is the most precious and its nurture our most bounden duty. For a happy and useful life, perhaps control is more needful than quality, volume, variety, or even tension of the brain. Of all gifts, then, to be cherished and nurtured, perhaps we should first place control, as by it effort is husbanded; perhaps of equal or scarcely of the second place, comes tension; quality of brain can not be had for the asking, and lack of quantity in individuals may be compensated by numbers. Variety, however charming, however grateful, is the least precious of these conditions of brain, and is the last which calls for nurture."

Selections.

A Means of Lowering the General Temperature.—British Medical Journal: Mr. Spencer Wells, in his lecture on the diagnosis and treatment of abdominal tumors, states that as a means of lowering temperature in cases when it has arisen after ovariotomy, he has tried aconite in small doses, quinine in large doses, salicylic acid in the form of salicylate of soda, in fact, almost every medicine that has been suggested as effecting this purpose, but all these trials have ended in disappointment. He has, however, succeeded distinctly in lowering temperature and in keeping it low by the application of ice or iced water to the head. The first trials were made after a suggestion of Dr. Richardson, by putting an ice-bag round the neck. Dr. Richardson believed that by icing blood that went through the carotids to the brain, and blood that came back through the jugulars, we should directly lower the temperature of the brain itself; and probably it may have been done experimentally, but in practice it was not found easy to do. It was difficult to keep any kind of cravat or collar that was tried, filled with ice, round the neck of the patient; it slipped off, and the old india-rubber bag or ice helmet, so well known in lunatic asylums, had to be resorted to. After a time Mr. Thornton combined a particular form of cap which answers the purpose extremely well. A pail of water with a large lump of ice in it is placed above the bed of the patient and the stream of iced water runs through the cap, which is formed of a coil of india-rubber tubing lined with linen. That is placed upon the patient's head, and it is made of different sizes and

shapes to fit the patient; the other extremity of the tube is put into a second pail at the side of the bed, and by this means the head is iced. The effect in lowering temperature is very marked, the thermometer in almost all instances indicating a fall of temperature within an hour. If the temperature be rising it is checked, and if very high it can be lowered, and so time is gained for the recovery of the patient. Many of the evil effects of ovariotomy appear to be due to the fact that the temperature of the body is for a time too high. The brain receiving blood of a temperature 5-6° higher than it has been accustomed to, does not give its orders to the secreting organs as it should do, and they all suffer in consequence. The kidneys do not act, there is no action of the bowels, and all the processes of nutrition and secretion suffer.

Iodoform in Eye-disease.—Patrick J. Hayes, L. R. C. P. Ed., L. R. C. S. I., in Medical Times and Gazette: I am anxious to direct the attention of my professional brethren to the value of iodoform as a therapeutic agent in the treatment of certain subacute and chronic diseases affecting the eye and eyelids. Many practitioners are of course aware that for a considerable time iodoform has been used as an application in cases of trachoma or granular lids, and reports have been published, in America and elsewhere, illustrative of the good results which frequently ensue upon its employment. I have not, however, seen any recommendation of it for such cases as phlyctenular and pustular ophthalmia, corneal ulceration, obstinate keratitis, ciliary blepharitis, etc.; hence as I have found it to benefit several patients so affected I venture to invite for it a trial at the hands of my *confrères*. With respect to the method of application I may mention that it is my custom to crush the crystals until they become reduced to a very fine powder, and then, with a delicate camel's-hair pencil, the powder is *freely* dusted over the affected surface. For use upon eyelids such an ointment as the following will be found convenient: iodoform, one part; vaselin, four parts; mix. Iodoform, when brought into contact with the eye, does not give rise to pain, and children who have once experienced its effect will readily tolerate subsequent applications. I have only to add that it is not suitable for, and ought not to be used during, the early or acute stage of conjunctivitis.

Boracic Acid in the Treatment of Cholera.—W. J. Butler, Surgeon Mad. Med. Service, in the London Lancet of August 24th: It is with considerable diffidence that I venture to write on a subject such as the treatment of cholera (which has so often been discussed, and with such poor results as regards the various remedies which have hitherto been recommended), feeling, as I do, that any new remedies or specifics must of necessity be looked on with distrust and incredulity. I will not attempt here to explain the theory on which the use of this drug is based, or the grounds on which I was led to resort to its use, but will simply state that having had considerable experience in the treatment of this fatal malady in the course of numerous and extensive epidemics in Burmah and Southern India, and having employed all the various treatments which have had any claim to success with very poor results (the most successful only yielding a percentage of from forty-five to fifty recoveries), I was induced to consider whether any more efficacious remedy could not be resorted to. About this period the properties of boracic acid had recently been made public, and I determined to try its effects. The pure acid not being readily procurable, the biborate of soda was at first employed, with marked benefit, the percentage of recoveries rising from seventy to seventy-five per cent. Subsequently the pure acid was employed in ten-grain doses every two hours, combined with soda bibor. or soda bicarb., under which treatment every case recovered. It was my intention to collect a large number of cases with a view of supplying statistics, but my health rendered a precipitate return to Europe imperative. Having, however, heard of the treatment being employed, as introduced by myself, by a professional friend to whom I had communicated it, in a recent epidemic with very favorable results, every case in which he resorted to it having recovered, I now venture to bring the treatment under notice, in the hope that it may prove as successful in the hands of others as it has done in my own. In no case were any signs of irritation or ill effects observed, and in all of them the renal secretion was re-established with much greater facility than under any other mode of treatment.

The Treatment of Trichinosis.—Berlin. Klin. Wochenschrift: Rohde had a case of trichinosis in which severe bleeding of the nose occurred, and in which he prescribed extract of secale cornutum as a styptic. The hemorrhage was immediately arrested, and with this rapid improvement of the general symptoms also occurred. This result led him to prescribe ergot in other cases of the disease, and in all instances distinct improvement followed. He believes therefore that we have perhaps in ergotin a means of treatment which, without having any marked effect on the human economy, may prove fatal to trichinæ and their offspring.

A case of absence of the inter-auricular septum, without cyanosis, in a man aged forty, discovered in a post-mortem examination, is reported in the London Lancet of August 24th by Richard Caton, M. D.

Oil of Rosemary.—Medical Times and Gazette: Prof. Köhler and Herr Schreiber, of Halle, have published in the Centralblatt Med. Wiss. the results of some experiments on the physiological action of oil of rosemary, which may turn out to be of great therapeutic value. The chief action of the oil is on the cerebro-spinal nerve-centers. The blood-pressure falls, owing to paralysis of the vaso-motor center in the medulla, but the heart is unaffected, and there is only retardation of the pulse if the drug is pushed to its utmost extent; in the latter case the respiratory center becomes ultimately paralyzed. Reflex excitability is increased by small and diminished by large doses of the oil, or by the repeated injection of small ones. Large doses antagonize the pathological irritability induced by strychnia. The most important effect of the oil, however, is on the temperature, though for this purpose it must be inhaled in the form of vapor, and not given by the stomach. By the latter form of administration only a temporary reduction of about 2° centigrade can be obtained; whereas by inhalation the temperature may be reduced without difficulty *as much as* 8°. If the same effect can be produced on the febrile human subject without the development of other poisonous symptoms, the inhalation of oil of rosemary may prove to be a useful addition to our antipyretic remedies, and we hope to hear before long that the experiment has been tried and succeeded. Köhler and Schreiber did not find the abortive action which has been ascribed to the oil confirmed in experiments on rabbits. Its stimulant effects excite peristaltic action of the bowels and produce slight diarrhea. The oil appears to be diuretic if given by the stomach or by inhalation, and the urine passed by both animals and men under these circumstances smells distinctly of violets. Its prolonged administration *per os* for many weeks may produce a slight degree of fatty change in the liver and nephritis, with albumen and casts in the urine. The irritability of the muscles is never affected by poisoning with oil of rosemary, nor has any alteration in the size of the pupils been observed.

Subnitrate of Bismuth.—Bulletin de l'Académie: Prof. Gruber, speaking of this substance at the Académie, observed that it is a mechanical absorbent just like any other dry powder; and it is a certain antacid, for while it does not absorb carbonic acid gas, which is secondary, it efficiently absorbs the normal acids in excess in the gastric juice, and especially the acids formed accidentally at the expense of alimentary or other matters introduced into the *primæ viæ*, acetic and lactic and volatile fatty acids. Moreover, the basic salt of bismuth possesses the very great advantage of absorbing sulphuretted hydrogen gas, or of producing with the sulpho-hydrate of ammonia, by double decomposition, nitrate of ammonia and sulphuret of bismuth. In this latter effect bismuth can only be replaced with difficulty, chalk, in particular, the employment of which would be so convenient, so cheap, and so inoffensive, not seizing hold of sulphuretted hydrogen. Oxide of zinc is the only other substance that can fulfill all the indications so well met by bismuth, and it easily becomes nauseating or emetic. It is, however, a remarkable thing that this inconvenience especially occurs when small doses of the oxide are employed, as from a twentieth to a fifth of a gram, which always meet with enough acid in the stomach to convert them into neutral salts. When large doses are given, as a half to one, two, three, and four grams per diem, they are exempt from all emetic properties, and especially when united with sufficient bicarbonate of soda to neutralize the acids of the *primæ viæ*. This combination furnishes excellent results in the same cases in which bismuth succeeds. The oxide of zinc, indeed, has this advantage over bismuth, that its sulphuret is white, and thus does not mask the presence of blood in the stools; nor does it raise fears in the mind of the timid of the presence of melæna.

The Physiological Action of Purgatives.—Med. Times and Gazette: This subject has recently been re-investigated by L. Brieger (Archiv für Exp. Pathologie). Large dogs were used. Dilute solutions of saline aperients (sulphate of magnesia and common salt) were absorbed without causing any change in the bowel; but as the strength of the solution was increased, the ligatured bowel contained more and more clear yellow alkaline liquid, containing flakes of mucus, intestinal epithelium, and mucous corpuscles. Drastic drugs (croton oil, colocynth) caused the secretion of a bloody liquid, or even set up diphtheritic inflammation of the mucous membrane, while laxatives, such as senna, rhubarb, aloes, gamboge, and castor-oil invariably caused firm contraction of the muscular coats, the injected drug, its watery parts being absorbed, being found spread over the whole mucous membrane, which was *not* inflamed. It thus appears that laxatives mainly act by exciting peristaltic contraction of the intestine; whereas salines, as was previously known, attract water into the bowel, and also induce abundant secretion from the intestinal glands. On the other hand, drastics in small doses have a similar action to laxatives, but in large ones they cause inflammatory exudation and hypersecretion. Brieger's results, therefore, differ from those of Moreau and Brunton in the *role* he assigns to the laxatives. If we remember rightly, the latter observers found that the various purgatives used agreed in producing a copious transudation of watery fluid into the bowel, and this Brieger only admits in the case of the saline and drastic aperients.